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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,975	01/18/2002	Limin Li	FUNC-0020-UT1	5176

22506 7590 03/17/2008

JAGTIANI + GUTTAG
10363-A DEMOCRACY LANE
FAIRFAX, VA 22030

EXAMINER	
FETTEROLF, BRANDON J	

ART UNIT	PAPER NUMBER
1642	

MAIL DATE	DELIVERY MODE
03/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/053,975	LI ET AL.	
	Examiner	Art Unit	
	BRANDON J. FETTEROLF	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-16,22-25,31,32 and 37-50* is/are pending in the application.

4a) Of the above claim(s) *7-16,22-25,31,32,37-42,44 and 45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-6, 43 and 46-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to the Amendment

The Amendment filed on 12/21/2007 in response to the previous Non-Final Office Action (6/26/2007) is acknowledged and has been entered.

Claims 1, 4-16, 22-25, 31-32 and 37-50 are pending.

Claims 7-16, 22-25, 31-32, 37-42 and 44-45 are withdrawn from consideration as being drawn to non-elected inventions.

Claims 1, 4-6, 43 and 46-50 are currently pending.

Rejections Withdrawn:

The rejection of Claims 46-50 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn in view of Applicants arguments.

Rejections Maintained, but amended in view of Applicants amendments:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-6, 43 and 46-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al. (IDS, US 5,891,668, 1999) as evidenced by Pornillos et al. (The EMBO Journal 2002; 21: 2397-2406).

Li. et al. teach antibodies which have been raised to normal or mutated forms of TSG101 (column 8, line 59-63). Specifically, the patent teaches antibodies that specifically recognize the coiled domain, leucine zipper and proline rich domains of TSG101 (column 8, lines 64 to column 9, line 4). Moreover, the patent teaches that the antibodies include, but are not limited to, polyclonal antibodies and monoclonal antibodies (column 9, lines 5-21). With regards to TSG101, Li et al. provide both the mouse TSG101 and the human homolog

(column 3, lines 26-38, see below, human homolog). Although the reference does not specifically teach that the antibody binds specifically to an epitope in the ubiquitination-regulating domain of TSG101 protein found in amino acid residues 1-250 of SEQ ID NO: 1, the claimed limitation does not to appear to result in a manipulative difference between the prior art because as taught by the specification (page 10, *Overview*) and as evidenced by Pornillos et al., the proline rich domain (referred to as PRD) and at least a portion of the coiled domain (referred to as COIL) lies within amino acid residues 1-250 of SEQ ID NO: 1 (page 2398, Figure 1A). Thus, the claimed antibody appears to be the same as the prior art. The office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same material, structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the applicant to prove that the claimed product is different from those taught by the prior art and to establish patentable differences. See In re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989). Lastly, the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. As such, the limitation that the antibody binds to an epitope in the ubiquitination regulating domain of TSG101, wherein the ubiquitination regulating domain "comprises" amino acid residues 50-140 or 1-140 of SEQ ID NO: 1, does not appear to result in difference between the antibodies taught by Li et al. which specifically binds to the proline rich domain of TSG101 for the reasons set forth above.

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Patent No. 5891668
APPLICANT:  LI, Limin
APPLICANT:  COHEN, Stanley N
US-08-670-274B-4

  Query Match             97.8%;  Score 2002;  DB 2;  Length 380;
  Best Local Similarity   100.0%;  Pred. No. 3e-155;
  Matches  380;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          11 MVSKYKYRDLTVRETVNVITLYKDLKPVLDSYVFNDGSSRELMNLTGTIPVPYRGNTYNI 70
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db           1 MVSKYKYRDLTVRETVNVITLYKDLKPVLDSYVFNDGSSRELMNLTGTIPVPYRGNTYNI 60

Qy          71 PICLWLLDTYPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV 130
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          61 PICLWLLDTYPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV 120

Qy         131 MIVVPGDEPPVFSRPISASYPPYQATGPPNTSYMPGMPGGISPYPSGYPPNPSGYPGCPY 190
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         121 MIVVPGDEPPVFSRPISASYPPYQATGPPNTSYMPGMPGGISPYPSGYPPNPSGYPGCPY 180
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Qy        191 PPGGPYPATTSSQYPSQPPVTTVGPSRDGTISEDTIRASLISAVSDKLRWRMKEEMDRAQ 250
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 PPGGPYPATTSSQYPSQPPVTTVGPSRDGTISEDTIRASLISAVSDKLRWRMKEEMDRAQ 240

Qy        251 AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNIELLKKKDEELSSALEKMENQSE 310
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNIELLKKKDEELSSALEKMENQSE 300

Qy        311 NNDIDEVIIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDLDVFLKHVRLLSRKQ 370
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 NNDIDEVIIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDLDVFLKHVRLLSRKQ 360

Qy        371 FQLRALMQKARKTAGLSDLY 390
              ||||||||||||||||||||
Db        361 FQLRALMQKARKTAGLSDLY 380
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Claims 1, 4-6, 43 and 46-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Brie et al. (US 5,892,016, 1999, *of record*).

Brie *et al.* teach a purified protein having an amino acid sequence having 100% identity to the amino acid sequence set forth in SEQ ID NO: 1 (Figures 1A-1B, *see* below). The patent further teaches antibodies including, but not limited to, polyclonal, monoclonal and chimeric which bind specifically to the polypeptide (column 17, line 15 to column 18, line 16). Furthermore, Brie et al. disclose that the antibodies can be used as a pharmaceutical agent for the prevention and or treatment of disease associated with expression of the polypeptide (column 16, lines 56-60). Although the reference does not specifically teach that the antibody binds to a polypeptide comprising a ubiquitination-regulating domain, the claims are drawn to the product *per se* and inherently, such an antibody would bind to a polypeptide comprising a ubiquitination-regulating domain. Thus, the claimed peptide appears to be the same as the prior art. The office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same material, structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the applicant to prove that the claimed product is different from those taught by the prior art and to establish patentable differences. See In re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989).

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OS   Homo sapiens.
PN   US5892016-A.
PD   06-APR-1999.
PF   23-JAN-1997;   97US-00786999.
PR   23-JAN-1997;   97US-00786999.
PA   (INCY-) INCYTE PHARM.
PI   Brie SL,  Goli SK;
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SQ   Sequence 390 AA;

  Query Match           100.0%;  Score 2047;  DB 2;  Length 390;
  Best Local Similarity  100.0%;  Pred. No. 6.7e-149;
  Matches  390;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MAVSESQLKKMVSKYKYRDLTVRETVNVITLYKDLKPVLDSYVFNDGSSRELMNLTGTIP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MAVSESQLKKMVSKYKYRDLTVRETVNVITLYKDLKPVLDSYVFNDGSSRELMNLTGTIP 60

Qy         61 VPYRGNTYNIPICLWLLDTYPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHP 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 VPYRGNTYNIPICLWLLDTYPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHP 120

Qy        121 QSDLLGLIQVMIVVFGDEPPVFSRPISASYPPYQATGPPNTSYMPGMPGGISPYPSGYPP 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 QSDLLGLIQVMIVVFGDEPPVFSRPISASYPPYQATGPPNTSYMPGMPGGISPYPSGYPP 180

Qy        181 NPSGYPGCPYPPGGPYPATTSSQYPSQPPVTTVGPSRDGTISEDTIRASLISAVSDKLRW 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 NPSGYPGCPYPPGGPYPATTSSQYPSQPPVTTVGPSRDGTISEDTIRASLISAVSDKLRW 240

Qy        241 RMKEEMDRAQAELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNIELLKKKDEELSS 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 RMKEEMDRAQAELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNIELLKKKDEELSS 300

Qy        301 ALEKMENQSENNDIDEVIIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDLDVFL 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 ALEKMENQSENNDIDEVIIPTAPLYKQILNLYAEENATEDTIFYLGEALRRGVIDLDVFL 360

Qy        361 KHVRLLSRKQFQLRALMQKARKTAGLSDLY 390
              |||||||||||||||||||||||||||||
Db        361 KHVRLLSRKQFQLRALMQKARKTAGLSDLY 390
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In response to the two rejections, Applicants note initially that the reliance on Pornillos et al., as evidence for what is taught in Li et al., or for any other purpose, is improper since the Pornillos et al. reference became available as a reference only months after Applicants' actual filing date of January 18, 2002. As such, Applicants assert that it is not evidence of the understanding of those of skill in the art as of the Filing date Applicants are entitled to herein. With regards to Li et al., Applicants assert that Li et al. does not teach, as recognized by the Examiner, an antibody that binds to an epitope in the specific range. In particular, Applicants assert that one of ordinary skill in the art could easily prepare an antibody, according to the teaching of Li et al., that binds to the coiled domain, the leucine zipper or the proline rich domains of TSG101, without preparing an antibody that binds specifically to an epitope in the ubiquitination regulating domains of TSG101, the claims are simply not taught by the reference. Moreover, Applicants contend that the Examiner's assertion that this "claimed limitation does not result in a manipulative difference between the prior art and the claims" is not clearly understood. For example, Applicants assert that simply because one of skill in the art following the teachings of Li et al., or Brie et al., might

prepare an antibody that accidentally binds to an epitope in a ubiquitination regulating domain of TSG101 by preparing an antibody directed to the proline rich region of TSG101 does not mean the same is taught. Also, Applicants contend that as the references, as the Examiner acknowledges, is silent as to this feature of the claims, the references must necessarily inherently teach that feature, or the rejection cannot be maintained. Hence, Applicants assert that since it is quite clear from the references that they do not inherently teach this, that is, they specifically teach features for an antibody epitope that would not be in the ubiquitination-regulating domain of TSG101, within the specific amino acid sequence as recited. Lastly, Applicants assert that if Applicants were merely claiming an unknown by inherent function of the prior art, that is, claiming antibodies that inherently bound an epitope within the ubiquitination region of TSG101 as defined by the sequence amino acid residues 1-250, 40-150 ect., the Examiners position would be entitled to due consideration. However, Applicants assert that the burden is on the Office, however, to demonstrate inherency, and it is not Applicants' burden to show that undeposited, prophetic antibodies that clearly may not bind to an epitope within the indicated ubiquitination domain, lack Applicants' properties.

These arguments have been carefully considered, but are not found persuasive.

First, regarding Applicants assertions that the citation of the Pornillos et al. reference is improper because it was published after the filing date of the instant application, the Examiner acknowledges and does not dispute Applicants assertions that the Pornillos et al. reference became available only months after Applicants' actual filing date of January 18, 2002. However, the Examiner recognizes that inherent features need not be recognized at the time of the invention. In particular, there is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. Schering Corp. v. Geneva Pharm. Inc., 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003), see MPEP 2112. In the instant case, the use of Pornillos was used as evidence that the proline rich domain (referred to as PRD) and at least a portion of the coiled domain (referred to as COIL) lies within amino acid residues 1-250 of SEQ ID NO: 1 (page 2398, Figure 1A). With regards to Applicants arguments pertaining to Li et al., the Examiner acknowledges and agrees with Applicants assertions that the reference, as asserted by the

Examiner, does not specifically teach that the antibody binds specifically to an epitope in the ubiquitination-regulating domain of TSG101 protein found in amino acid residues 1-250 of SEQ ID NO: 1. However, as stated above, the Examiner recognizes that Li et al. teach polyclonal and monoclonal antibodies that specifically recognize the coiled domain, leucine zipper and proline rich domains of TSG101, wherein the TSG101 protein has 100% identity from amino acid reside 11 to 390 of the TSG101 protein of instant claims. Thus, while Applicants contend that one of ordinary skill in the art could easily prepare an antibody, according to the teaching of Li et al., that binds to the coiled domain, the leucine zipper or the proline rich domains of TSG101, without preparing an antibody that binds specifically to an epitope in the ubiquitination regulating domains of TSG101, Applicants have not provided a patentable difference between the claimed antibody and that taught in the prior art. Applicants are reminded that the office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same material, structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the applicant to prove that the claimed product is different from those taught by the prior art and to establish patentable differences. See In re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989). In the instant case, the same rationale can be applied to Applicants arguments pertaining to Brie et al., as well as, the inherency issue argued by Applicants. In other words, the Examiner recognizes that both Brie et al. and Li et al. teach isolated monoclonal and polyclonal antibodies which specifically bind to a protein having 98% over all identify (100% identity from aa 11-390) or a protein having 100% sequence identity to the TSG101 protein recited in the claims (Li et al. and Brie et al., respectively), but does not teach that the antibodies specifically bind to an epitope in teh ubiquitination-regulating domain of TSG101 protein found in amino acid residues 1-250, 50-140, ect. However, the office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same material, structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the applicant to prove that the claimed product is different from those taught by the prior art and to establish patentable

differences. See In re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989).

Therefore, No claim is allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON J. FETTEROLF whose telephone number is (571)272-2919. The examiner can normally be reached on Monday through Friday from 7:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brandon J Fetterolf, PhD
Primary Examiner
Art Unit 1642

/Brandon J Fetterolf, PhD/
Primary Examiner, Art Unit 1642

/Larry R. Helms/
Supervisory Patent Examiner, Art Unit 1643